REMARKS

The drawings, the specification, and claims 1 - 5 have been objected to for informalities. Claims 1 - 10 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,799,047 B1 to Bahl et al. (hereinafter "Bahl"). Applicant disagrees with all rejections of record, and respectfully submits that the claims, as amended, are in condition for allowance.

Objections to the Drawings and the Specification

The amendments to paragraphs 0018 and 0023 of the specification address the objection to references to "Figure 6" by amending these to refer to Figure 5 instead of Figure 6. The original text of these paragraphs describes and discusses the content of and numerals in Figure 5. Accordingly, no additional drawings or amended drawings are required to address this objection. These paragraphs have also been amended to correct the informalities noted in the Office action.

Objections to the Claims

In response to the Examiner's objections, the above amendments to claims 1-5 clarify the manner in which the present invention is claimed. The remaining pending claims do not claim an "improvement," so no further such amendments are required.

Rejections under §102

Amended independent claim 1 recites, *inter alia*:

> a method comprising the steps of: communicating from a computer characteristic data representing radio signal environment in a sub-area corresponding to said location data to said portable device, and monitoring by

said portable device received radio signals corresponding to said data representing radio signal environment to detect a change in location of said device.

Bahl relates generally to wireless communication, and is directed to a method of determining the location of a mobile unit comparing measured radio signal strength information to values in a selected pre-calculated table. A goal of Bahl is to enable a computer to determine the location of a user by determining the location of the user's mobile personal computer. The location of the mobile personal computer is determined either by the mobile personal computer itself, comparing local radio signals received from wireless base stations to data in a reference table, or by a central server, comparing the radio signals from the mobile personal computer received at the base stations (and reported to the central server) to data in a different reference table. Bahl does not contemplate cooperation or communication between computers to determine location of the mobile personal computer or to detect a change in the location of the mobile device.

The Examiner contends that with regard to independent claim 1, Bahl discloses a system wherein a mobile computer ("portable device" of the application), arranged for wireless data communications with a computer ("server" of the application), is located using radio signals between said portable device and access points ("base stations" of the application), and wherein said computer uses a database relating radio signal characteristics to a location to compute location of said device, and communicates location data to said portable device using wireless data communications, the improvement wherein said computer communicates characteristic data representing radio signal environment in a sub-area corresponding to said location data to said portable device, and wherein said portable device monitors received radio signal environment to detect a change in location of said device.

The Examiner cites column 5, lines 28-37; column 12, lines 46-51; and Figs. 1-4 and 6 for the proposition that Bahl describes a server communicating location data to a portable device and further communicating characteristic data representing radio signal environment in a sub-area corresponding to said location data to a portable device. Bahl does not disclose this configuration in the cited text or elsewhere. At column 5, lines 28-37, Bahl generally notes that the invention relies on signal strength information gathered by access points and portable devices to compute the location of a user, but the cited text does not discuss any communication of this location information between a portable device and a server. At column 12, lines 46-51, Bahl mentions the possibility of a one-time passing of variables (mathematical constants used in calculating signal strength) to the portable device. These constants, pertaining to wall attenuation factors, physical distances between access points, and other physical features of the system, are used to refine the accuracy of the location tables; the constants are not information about the position of the portable device nor about the radio signal characteristics of a particular location (as described by the present application). Figs. 1 and 2 of Bahl suggest that there is a possibility of communication between a server and a portable device, but the specification in Bahl refers only obliquely to the use of a network to connect computers in general. *See* Bahl at col. 4:1-4, col. 4:65-col. 5:2, col. 12:46-51. In contrast, the present invention contemplates regular communication between the portable device and the server Thus, Bahl does not disclose communication between a portable device and a server as described and claimed in the present invention. The Examiner also cites column 5, lines 42-54 and Figs. 1-4 and 6 for the proposition that Bahl discloses a portable device that monitors radio signals to detect a change in location. However, the portable devices described in Bahl do not monitor radio signals to *detect*

changes of location, but to *establish* location. The cited portions of Bahl describe a portable device monitoring radio signals in order to compute the portable device's location, i.e., the portable device in Bahl self-determines its location by monitoring radio signals. *See* Bahl, col. 2:15-20. The invention of the application describes a portable device that monitors radio signals to identify *changes* of location, at which point the change of location is noted and some further action may be taken to update the portable device's information (e.g., requesting updated location information from the server). Thus, Bahl does not disclose a portable device which detects changes in its location.

For at least the foregoing reasons, because Bahl fails to disclose or suggest all limitations of claim 1 and fails to disclose or suggest the arrangement of elements as recited in claim 1, Applicant respectfully submits that claim 1 is patentable over Bahl. Additionally, because claims 2-5 depend from claim 1, Applicant respectfully submits that these claims are also in condition for allowance.

Claim 6 of the present invention recites, *inter alia*:

> a processor arranged to receive from said radio and store location data and characteristic data representing radio signal environment in a sub-area corresponding to said location data, said processor being arranged to cause said receiver to monitor signals corresponding to said radio signal environment and to provide said processor with radio signal data corresponding to said radio signal environment, and said processor being further arranged to use said radio signal data and said characteristic data representing radio signal environment in a sub-area corresponding to said location data to determine if said device has changed location.

With regard to independent claim 6, the Examiner contends that Bahl discloses a portable device arranged to communicate with a computer using wireless data communications comprising a wireless network interface and a processor arranged to receive location data and corresponding characteristic data from the radio and store this information.

Again, the devices described by Bahl may happen to be arranged in a way that has the potential to allow communication between a portable device and a server, but this potential is not mentioned in Bahl. In Bahl, the mere *possibility* that a portable device and a server *could* communicate is incidental to the necessity of a beacon radio signal, which signal happens to be provided by a wireless network device in the exemplary system of Bahl. That is, the reason Bahl may have the potential for such communication is a side effect of the use of wireless network hardware to send and monitor beacon signals. The present application, however, explicitly describes and notes the advantages of a configuration that allows portable devices to communicate with a server and claims such a configuration. Thus Bahl does not disclose a network arranged for the purpose of communication between a server and a portable device. Further, Bahl never discloses actual communication between the portable device and the server, so Bahl cannot disclose a portable device arranged to receive and store location data and characteristic data sent from a server. Indeed, the Bahl system does not contemplate such "teamwork" between servers and portable devices; Bahl focuses on servers and devices independently determining the location of other devices or of themselves.

The Examiner also contends that Bahl discloses the use of a processor to monitor radio signals to determine whether a portable device has changed location. For the reasons stated above regarding claim 1, the system of Bahl does not monitor radio signals to detect changes of location. The system of Bahl computes locations, but Bahl never mentions a portable device that monitors for changes in location, and certainly not a portable device that signals such a change to another device or a server.

For at least the foregoing reasons, because Bahl fails to disclose or suggest all limitations of claim 1 and fails to disclose or suggest the arrangement of elements as recited in

claim 1, Applicant respectfully submits that claim 6 is patentable over Bahl. Additionally, because claims 7-10 depend from claim 1, Applicant respectfully submits that these claims are also in condition for allowance.

CONCLUSION

In view of the foregoing remarks, Applicant respectfully submits that the pending claims are in condition for allowance. Applicant hereby authorizes the Commissioner to charge payment of any additional fees or credit any overpayment associated with this communication to Deposit Account No. 02-4377.

Respectfully submitted,

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